

## THE MIGRATION OF KILLDEER, MEADOWLARK, ROBIN AND BLUEBIRD.

The information received in response to the call in the last BULLETIN is not sufficient to determine the northward movement of any of the species named, nor even to determine the northward winter limit. But the data received indicates that in the middle regions the migrations were nearly a week later than usual. But strangely enough, they clearly indicate that as far east as Ohio at least, Meadowlark, Robin and Bluebird wintered in small numbers further north than usual. A considerable activity in the field is necessary to distinguish between the winter resident individuals of a species and the first migrants. There is nothing to indicate how far north Killdeer passed the winter except that it is reported as wintering at Stillwater, Oklahoma, and absent from Lincoln, Nebraska.

In this connection it may be of some interest to compare the average and actual dates of arrival for these four species for a series of years in four different localities representing the upper middle Mississippi Valley, the lower lake region, and Maine. The contributors of these notes are: Mr. N. Hollister, Delavan, Wis.; Mr. C. H. Morrell, Pittsfield, Me.; and the writer for Grinnell, Iowa, from 1885 to 1890 inclusive, and from Oberlin, Ohio, from 1894 to 1899 inclusive.

### KILLDEER.

	1894	1895	1896	1897	1898
Delavan, Wis.....	March 10.	March 23.	March 9.	March 22.	March 7.
Oberlin, Ohio.....	March 5.	March 23.	Feb. 27.	March 6.	March 6.

### MEADOWLARK.

	1894	1895	1896	1897	1898	1899
Delavan, Wis.....	March 5.	March 24.	March 17.	Jan. 15.	March 5.	March 6.
Oberlin, Ohio....	March 10.	March 23.	March 17.	March 15.	March 11.	March 8.
Pittsfield, Me....	April 18.		April 18.	April 24.	Uncommon.	

### ROBIN.

	1894	1895	1896	1897	1898	1899
Delavan, Wis. ...	March 6.	March 18.	March 8.	March 11.	March 8.	
Oberlin, Ohio.....	Feb. 28.	Jan. 7.	Feb. 26.	Feb. 13.	March 7.	March 20.
Pittsfield, Me....	March 31.	April 7.	March 28.	March 30.		April 8.

### BLUEBIRD.

	1894	1895	1896	1897	1898	1899
Delavan, Wis.....	March 4.	March 25.	March 10.	March 11.	March 7.	
Oberlin, Ohio.....	Feb. 28.	March 23.	Feb. 29.	Feb. 17.	March 7.	Feb. 20.
Pittsfield, Me....	March 13.		April 18.	April 7.		April 7.

Comparing Delavan, Wis., with Oberlin, Ohio, as to the time of arrival, since they are more nearly alike in physical features and latitude, we find that while Killdeer, Robin and Bluebird arrive somewhat earlier at Oberlin than at Delavan, on the average, the opposite is true of Meadowlark. It is difficult to assign a reason for this difference unless it be due to the fact that the species regularly winters at Oberlin while it apparently does not winter at Delavan, Wis. The wintering individuals are disregarded in determining the migratory movements of the species, of course, and some confusion may result in exactly determining just when the first migrants appear, while at Delavan, Wis., the first ones seen will be migrants. But that part of the Mississippi Valley may present conditions peculiarly favorable for early movements of this species. The lower latitude and warmer winters of northern Ohio would make earlier movements of most species of birds reasonable and expected, other conditions being equally favorable. The much higher latitude of Pittsfield, Me., is the cause of the later appearance of all the species there.

So good an opportunity to determine which of these four hardy species reaches the north first should not be missed. Consequently the following table for each of the places mentioned has been prepared.

Grinnell, Iowa.	1885	1886	1887	1888	1889	1890		
Killdeer.....	March 21.	March 16.	March 8.	March 17.	March 11.	March 18.		
Meadowlark...	March 5.	March 24.	March 8.	March 15.	Feb. 26.	March 17.		
Robin.....	Wintered.	March 14.	March 8.	Feb. 23.	Feb. 27.	Feb. 12.		
Bluebird.....	March 1.	Feb. 23.	Feb. 28.	Feb. 21.	March 1.	Feb. 12.		
Delavan, Wis.	1892	1894	1895	1896	1897	1898		
Killdeer.....		March 10.	March 23.	March 9.	March 22.	March 7.		
Meadowlark...	April 30.	March 5.	March 24.	March 17.	Jan. 15.	March 5.		
Robin.....	March 7.	March 6.	March 18.	March 8.	March 11.	March 8.		
Bluebird.....	March 26.	March 4.	March 25.	March 10.	March 11.	March 7.		
Oberlin, Ohio.	1894	1895	1896	1897	1898	1899		
Killdeer.....	March 5.	March 23.	Feb. 27.	March 6.	March 6.	March 3.		
Meadowlark...	March 10.	March 23.	March 17.	March 15.	March 11.	March 8.		
Robin.....	Feb. 28.	Jan. 7.	Feb. 26.	Feb. 13.	March 7.	Feb. 20.		
Bluebird.....	Feb. 28.	March 23.	Feb. 29.	Feb. 17.	March 7.	Feb. 20.		
Pittsfield, Me.	1890	1892	1893	1894	1895	1896	1897	1899
Meadowlark.		May 12.		Apr. 18.		Apr. 18.	Apr. 24.	
Robin.....	Apr. 4.	Mar. 28.	Mar. 31.	Mar. 31.	Apr. 7.	Mar. 28.	Mar. 30.	Apr. 8.
Bluebird.....	Apr. 3.	Mar. 30.	Mar. 29.	Mar. 13.	None.	Apr. 18.	Apr. 7.	Apr. 7.

In studying these tables one must remember that the Bluebirds were nearly exterminated during the winter of 1894-5, a fact which is clearly bro't out by the records of arrival for 1895 and 1896. These two years

are therefore not representative for the Bluebird. It seems pretty evident that the Bluebird averages a little earlier than any of the others, closely followed by the Robin, a little later by the Meadowlark, and often two weeks later by the Killdeer. But the Killdeer averages not a little later in Iowa and Wisconsin than in Ohio, while the Meadowlark averages a little earlier. In practice the student of migration not seldom finds all four species on the same day. Here in northern Ohio we rather count on seeing the Robin and Bluebird on the same day. The Meadowlark as a migrant usually comes later.

Of course these records cover a very small part of the field of the migration of these species, but being more or less representative stations in widely different regions, they may fairly be regarded as an index to the more northern parts of the eastern and middle states. While more numerous records from many other localities would furnish more reliable data upon which to base statements, it is doubtful if the relative times of migration of the four species would be materially changed. The only fair comparison is between places in which the species being studied is equally numerous in individuals. Thus, Pittsfield, Me., where Meadowlark is not common, if it is not actually rare, should not be compared with a region where the species is common, because it is very likely that the first arrivals would not be seen, and so the record would be too late. Such a condition would show fluctuations impossible to account for.

There are a number of such groups of well known birds whose movements in the spring would well repay extended study in relation to each other—a course of study in which the old note-book would take an active part. One of these groups is: Cowbird, Red-winged Blackbird and Bronzed Grackle. If members are interested enough in this group to send me their notes for a series of years (as many as you have), simply the dates of first appearance, or the statement that it winters if that be the case, I shall be glad to report on it in the next issue. The notes should be sent to me as soon as possible so that they can be carefully studied.

The southward movement of these species would be interesting, but I have at hand only notes from Mr. Benj. T. Gault, from Glen Ellyn, Illinois, and my own. These are too few to make a profitable comparison.

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